

[BACK TO RESULTS](#)[NEW SEARCH](#)

## Ungenerous endowments. The natural resources myth

INDEX TERMS

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"It is natural to think of plentiful resources, such as oil, coal, minerals or fertile land, as good for a country. Natural, but usually wrong"

IT HAS become a familiar lament. Country X, now all but bankrupt, really ought to be rich - because it has such huge reserves of oil, of farmland or minerals. How could it have frittered away such natural advantages? And how could country Y, which lacks natural endowments, have overtaken it? Examples are legion: on one side stand Mexico, Nigeria, Argentina; on the other, South Korea, Taiwan, Japan.

Nor is this just bar-room talk. In September the World Bank, bowing to years of green pressure, published a report on environmentally sustainable development, in which it offered measures of economic performance that took account of the environment. One such is 'wealth', based on an assessment of capital assets and human resources - and natural endowments. The Bank even produced a ranking of countries by this new measure (see table). Thanks to natural resources, the countries with the highest wealth per head are Australia and Canada; the top 15 include Iceland, Qatar, the United Arab Emirates and Kuwait. Germany scrapes in at 15th; Britain comes in 22nd place.

That may sound startling, but on reflection it appears to make sense. It is, after all, wonderful to be able to make money out of stuff lying in the ground, rather than having to work or build factories. And surely nobody would deny that Australians have benefited from their country's minerals; or that inhabitants of the Gulf states have been made rich by oil? Even before the 1973 and 1979 price shocks, oil in particular had a potent image, evoking as it did Texan and Californian oil millionaires, the tentacular global oil companies known as the 'Seven Sisters', wealthy and abundantly confident Arab sheikhs.

It also seems obvious enough that natural resources have played a big part in economic success in the past. For a long time, indeed, natural resources, including agriculture, were almost the only source of income and wealth. Egyptian civilisation flourished on the back of the fertile Nile valley. Wool and wheat produced the magnificent churches of East Anglia. Gold from the Americas propelled Spain to leadership of Europe in the 16th century.

Even when industry came, natural resources still seemed dominant. Cotton made white planters in the American South rich. The factories of the early industrial revolution in Britain, Belgium and elsewhere depended on plentiful local deposits of iron ore and coal. At the turn of the century New Zealand and Argentina were among the world's richest countries (measured by income per head), thanks mainly to their farms. Something similar was true for Australia and South Africa, thanks to their mines.

### A harsher reality

## Ungenerous endowments. The natural resources myth

So natural resources, it appears, make you rich. Yet a closer look at both history and economics casts considerable doubt on this obvious-sounding conclusion. The value of natural resources is, indeed, clear - provided that other things are equal. The trouble is that other things never are equal. Even worse, it is precisely the existence of valuable natural resources that makes these other things unequal.

Consider the historical record. Surprisingly many economies that flourished on the back of natural resource booms then fell back and became fallow. When Spain's imported gold brought inflation and slow growth, resource-poor Holland overtook its erstwhile imperial master. In the 18th century Haiti's exports to Europe, mostly of sugar, were worth more than those of the 13 American colonies put together; shortly afterwards Haiti collapsed into the poverty that mires it still. The American South lost the civil war partly because the more industrial North had swept past it economically. Later in the 19th century, resource-rich Russia was overtaken (and later defeated in war) by apparently poorer Japan.

Recent trends are even more striking, partly because human and capital resources have become more significant than natural wealth. Still, it is notable that so many of the countries in the world with the highest incomes per head are notably poor in natural resources: examples include Japan, Switzerland and Denmark. Australia, though still rich, has slipped relative to others for most of this century. And several countries with plentiful natural resources have relatively low incomes per head: Russia, Brazil and Argentina, for instance. A similar pattern is detectable inside countries. Louisiana and Texas, for instance, both hugely rich in natural resources, have significantly lower incomes per head than resource-poor Connecticut and Massachusetts.

Or consider developing countries. The star economic performers of the past 30 years have been resource-poor countries in East Asia such as South Korea, Taiwan, Hong Kong and, more recently, Thailand. Several of their resource-rich rivals such as Mexico, Venezuela, Ghana and Nigeria have gone spectacularly bust, some of them more than once. Many once-feared OPEC countries are now in serious economic or financial difficulty - even the most oil-rich of them all, Saudi Arabia.

A broad look at the experience of developing countries confirms that these are not odd anecdotes or isolated incidents. A recent paper by Jeffrey Sachs and Andrew Warner of Harvard University\* assesses possession of natural resources and economic performance from 1971 to 1989 in a sample of 97 countries. Their regression analysis strongly suggests that growth was higher among less-endowed countries than among those with abundant natural resources (see chart). Mr Sachs and Mr Warner also note that, of the top 18 developing countries ranked by growth rates during this period, only two - Malaysia and Mauritius - were rich in natural resources.

That result sounds surprising. Yet there are good economic reasons to expect a link between natural-resource wealth and slow economic growth. And, more recently, some economists have focused on a number of socio-political factors that help to explain why natural resources have so often been transformed from a blessing into a curse.

### Ills and diseases

The best-known illness to afflict resource-rich economies is the 'Dutch disease', a term coined to describe Holland's experience after its discovery of massive natural-gas reserves in the late 1950s. There is disagreement about the exact diagnosis (and Holland is hardly a byword for economic or social disaster). But the general consensus is that the main symptom is the shrinkage of an economy's traded-goods sector, which often means its manufacturing capacity.

A couple of forces are to blame for this. One is that natural resources do not come for free. Exploiting them often requires considerable investment, which diverts capital and labour away from productive investments in traded goods, including manufacturing. This is especially important if, as

## Ungenerous endowments. The natural resources myth

some economists maintain, manufacturing plays a crucial role in generating economic growth. Another force at work is real exchange-rate appreciation, thanks to either a rise in resource exports or a cut in resource imports, which undermines the competitiveness of traded goods.

How serious is the Dutch disease? Enough to be a concern for British policy-makers in the late 1970s, as they pondered the probable effects of North Sea oil. The experience of the early 1980s, when sterling soared against other currencies and the British manufacturing base shrivelled, suggested that the Dutch disease had struck with a vengeance. Other countries have suffered too. In 'Oil Windfalls: Blessing or Curse?' (published by Oxford University Press in 1988), Alan Gelb of the World Bank found that the average real effective exchange rate of a sample of six oil-exporting countries had risen by nearly 50% between 1970 and 1984, severely hampering nascent manufacturing sectors.

Yet fears about the Dutch disease can be exaggerated. Real exchange-rate appreciation brings benefits as well as costs, for instance making possible higher consumption or public investment. The share of manufacturing in most economies has declined, and few now attribute to it any special role in generating economic growth. Several countries have found ways to avoid the disease through fiscal and monetary policies. Indeed the bigger risk is often that attempted 'cures' for the Dutch disease can prove harmful: in particular, protection or subsidies for manufacturing may themselves damage competitiveness.

If the Dutch disease is not necessarily catching, however, a second economic cause of the poor performance of resource-rich countries is less easily avoided. Because commodity prices swing far more than prices of goods and services, natural-resource economies are more vulnerable to external shocks. This applies both ways: that is, whether the shock sends price levels up or down. Highly volatile commodity prices make it hard for an economy to adjust smoothly whether they produce unexpected windfalls or shortfalls.

Two examples of the problems associated with volatility are provided by coffee in the late 1970s and by oil in 1979-82. Coffee prices rose by 216% between 1975 and 1977, only to fall back later; oil prices rose by 154% between 1977 and 1980 and then tumbled. One might have expected coffee exporters such as Costa Rica and Côte d'Ivoire to have done well from the first shock; and oil-producers such as Mexico and Nigeria to have gained from the oil-price hike. In fact they did terribly. In all four, the balance of payments deteriorated despite the massive terms-of-trade improvement brought about by the commodity-price rise. And in all four, growth rates were slower after the shock than they had been before. Both Mexico and Nigeria in effect went bust in the 1980s.

What these countries have found - as have so many lottery-windfall countries. All too often the proceeds of recent commodity windfalls have accrued to governments, either through taxes or because they have nationalised the companies involved. Naturally enough the governments have then instituted lavish spending programmes - for instance, sustaining a generous welfare state (Holland, Norway), building a new transport network (Trinidad), moving the country's capital (Nigeria) or improving health and education (everywhere).

Public spending is not always bad; indeed the right kind of public investment can be an important engine of economic growth. Inevitably, however, many of the public-spending programmes put in place by countries enjoying a resource boom have not been of this kind. Economists who have sought to measure the effectiveness of such spending, for instance after the 1973 oil shock, have found that it often yielded minimal, zero or, in a few cases, even negative rates of return.

There is a further problem with expanding public spending. Once started, it is hard to stop. Many countries have found themselves lumbered with budgetary burdens that have become untenable when the resources run out or their price falls. The necessary adjustment can be huge; in the past five years, the value of Venezuela's oil exports expressed in terms of the average cost of its imports

has fallen by 75%. Figures such as these make the past decade's rash of current-account and budget deficits, or even bankruptcies, among oil-exporting countries look less surprising.

It could still be that, troublesome though natural resources often are, especially when they produce windfalls, the problems can be handled by the right government action. Yes, up to a point, they can be, as several examples have shown. Indonesia, for instance, has mostly used its oil resources wisely, developing a thriving and balanced economy. Malaysia has built a booming manufacturing sector. Botswana has diversified similarly. Kuwait has invested a big part of its oil wealth in foreign assets (as, to some extent, has Britain with North Sea oil revenues).

### **Unworthy of their rents**

These examples suggest a few guiding principles for a country that either already has ample natural resources or experiences a sudden natural-resource boom. Do not indulge in breakneck, ill-considered fiscal expansion; instead, keep your public sector small. Do not treat temporary windfalls as permanent income gains. Invest the proceeds from natural resources cautiously and productively, that is in education or essential infrastructure. Keep your economy open to foreign competition and allow the free movement of capital. Build up foreign assets. These are all things that any country should do to increase its prosperity; so they ought not to be hard for one that is rich in natural resources.

Yet in practice they have often proved not just hard, but virtually impossible. Why? The answer lies in some socio-political factors that provide the clinching argument against those who persist in seeing natural-resource endowments as a blessing. The resource-rich fail to use their wealth wisely not because they are, coincidentally, run by cursed governments, or because they are short of good economic advisers. Their failure is not, in fact, coincidental at all: it arises precisely because they are resource-rich. An analogy is with a 21-year-old who inherits a fortune that she promptly dissipates - often leaving her more indebted and worse off than before.

A natural-resource endowment gives rise to what economists call 'rent' - the difference between what is actually paid to the producer and the minimum price that he would have demanded to produce the stuff in the first place. For many countries that have enjoyed booming natural-resource incomes in the past few decades, especially those that have had sudden windfalls, these rents have been staggeringly large. Nice for the producers, it seems; by assumption, too, nice for the country's people.

The trouble is that the lure of those fat rents can be hard to resist. The upshot is routinely an outbreak of competitive rent-seeking. The power centres in any resource-rich country soon notice that the profits from capturing a slice of the rent from the natural resources beat those from any possible alternatives; and they act accordingly.

Behind the economic jargon is a simple enough proposition: give a group of people a big pot of money and they will spend their time arguing about how to share it out, not thinking of risky ways to make even more money by investing the original sum. Experience bears this out. In Mexico in the 1970s, politicians and firms battled over the state's oil revenues. So it was in Venezuela, Nigeria and several other big oil-exporting countries. Nor is the experience restricted to oil-exporters. Other resource-rich countries have blown the proceeds of their wealth in competitive rent-seeking: Australia and Brazil are outstanding examples.

In developed countries, such rent-seeking can damage other parts of the economy. Louisiana spent too much on its roads and hospitals; Alaskans concentrate too hard on their regular annual dividend from the state's oil fund. Too many people in such places also tend to ask why they should bother getting an education or working hard - or at all - when they can live off a natural endowment.

Idleness has its attractions, and if well-informed voters freely decide to live off natural-resource

## Ungenerous endowments. The natural resources myth

wealth, their choice cannot be gainsaid, imprudent though it may be. Rather worse is what happens when aggressive rent-seeking takes place in poorer countries, where liberal, democratic traditions are often weak, if they exist at all. There living off resources is all too likely to corrupt the business of government - and so the functioning of the entire economy.

Mexico, Venezuela and a slew of Middle Eastern and Asian oil-exporters all offer sorry examples of what goes wrong. Corruption in the natural-resource sector spreads across the whole public sector - and frequently suborns the government. Instability follows. When people bemoan the coincidence that oil is so often to be found in dangerously unstable countries, they overlook the obvious explanation: that it is the oil (and the rent-seeking it engenders) that has made the countries unstable.

Nowhere suffers more than Africa, the poorest continent of all. Civil wars in countries such as Angola and Zaire have frequently been driven (and often financed) by mineral or oil wealth. Successive governments in Sierra Leone have been bought by diamond traders. Governments in Cote d'Ivoire, Ghana, Cameroon and Gabon have all at different times been suborned by powerful groups fighting over their natural-resource wealth.

Most notorious of all is Nigeria, which 'ought', on the basis of its massive oil reserves, to be rich. Since independence, Nigeria has had a civil war, a succession of military coups and corruption on a gargantuan scale - all paid for to a large extent by oil money. The troubles in Ogoniland that culminated in the recent execution of Ken Saro-Wiwa were largely about oil. On one estimate, nearly 75% of the money 'invested' in large public-sector capital projects in 1970-85 was diverted - into officials' pockets, construction frauds and overseas bank accounts. Nigeria today is one of the most corrupt, most heavily indebted and slowest-growing of African countries.

It also offers no end of a lesson. Next time you hear of a poor country that has suddenly struck oil or discovered diamonds, do not sit back and give thanks that its future is assured. Tremble, rather, for its poor people - for they will be the last to benefit.

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### Don't believe your eyes

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#### Top 15 countries, ranked by wealth per head, 1990

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	Wealth \$' 000 per head	Sources of wealth People	Capital assets	% of total Natural resources
Australia	835	21	7	71
Canada	704	22	9	69
Luxembourg	658	83	12	4
Switzerland	647	78	19	3
Japan	565	81	18	2
Sweden	496	56	16	29
Iceland	486	23	16	61
Qatar	473	51	11	39

## Ungenerous endowments. The natural resources myth

United Arab Emirates	471	65	14	21
Denmark	463	76	17	7
Norway	424	48	22	30
United States	421	59	16	25
France	413	77	17	7
Kuwait	405	62	9	29
Germany	399	79	17	4

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Source: World Bank                      Totals may not add up due to rounding

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\* 'Natural Resource Abundance and Economic Growth.' By Jeffrey Sachs and Andrew Warner.  
Harvard Institute for International Development, October 1995

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